

# ASX's Plans to Support and Deliver Services to the Carbon Pollution Reduction Scheme

*National Power Conference*

1 September 2008

# Outline

- The Role of Financial Markets
- Australia's Forthcoming Scheme
- Likely Market Evolution
- Emissions Trading at ASX

# Recap of Carbon Markets

Carbon Market at a Glance, Volumes & Values in 2006-07

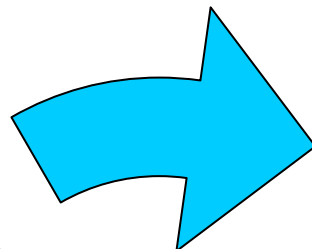
	2006		2007	
	Volume (MtCO <sub>2</sub> e)	Value (MUS\$)	Volume (MtCO <sub>2</sub> e)	Value (MUS\$)
<b>Allowances</b>				
EU ETS	1,104	24,436	2,061	50,097
New South Wales	20	225	25	224
Chicago Climate Exchange	10	38	23	72
UK ETS	na	na		
<b>Sub total</b>	<b>1,134</b>	<b>24,699</b>	<b>2,109</b>	<b>50,394</b>
<b>Project-based transactions</b>				
Primary CDM*	537	5,804	551	7,426
Secondary CDM	25	445	240	5,451
JII	16	141	41	499
Other Compliance & Voluntary Transactions	33	146	42	265
<b>Sub total</b>	<b>611</b>	<b>6,536</b>	<b>874</b>	<b>13,641</b>
<b>TOTAL</b>	<b>1,745</b>	<b>31,235</b>	<b>2,983</b>	<b>64,035</b>

\*: Clean Development Mechanism; †: Joint Implementation

# The Role of Financial Markets

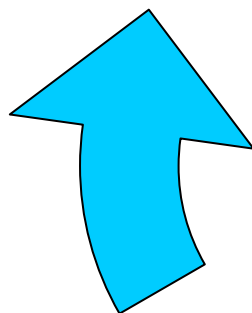
1. Forward markets for emission permits will facilitate efficient price discovery and risk transfer.

Forward Markets

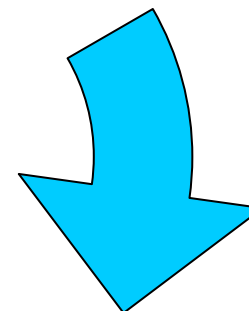


Debt and equity markets

2. Efficient forward markets will inform investment decisions.

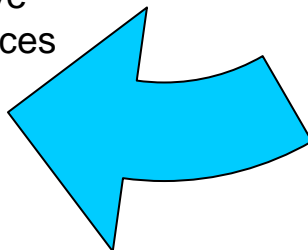


Preference for less carbon intensive goods and services



Innovation & Competition

4. Over time, the preferences of consumers and businesses will change.



3. Firms will compete to provide carbon inclusive goods and services at least cost.

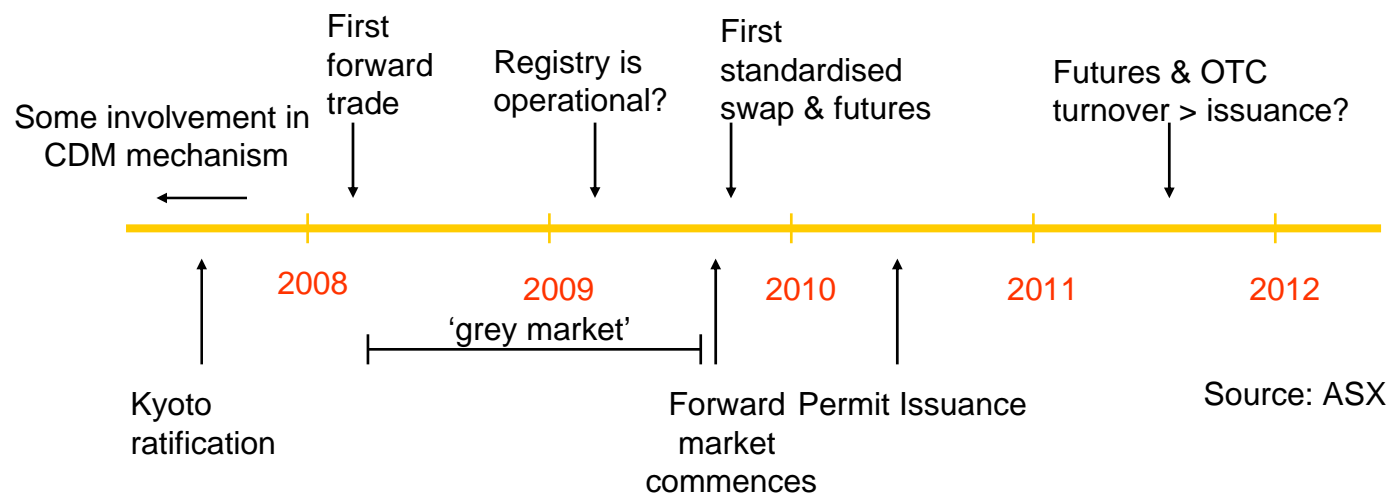
# Australia's Forthcoming Scheme

- Cap & trade:
  - 5 years of firm caps extended annually or as per an international agreement;
  - with a price cap for 5 years (form & level to be determined);
  - an additional 10 years of gateways (ie minimum and maximum cap levels) extended every 5 years.
  - Scheme Caps will not be finalised until Q1 2010;
  - no less than 70% of permits (including some future date stamped permits) to be auctioned.
- Linkages:
  - can't export Australia's emission permits;
  - the use of eligible Kyoto units is capped at an installation level to be determined;
- Compensation:
  - to 'smooth' the transformation process all auction revenues will be used to compensate EITE industries, households and coal fired generators.

# Australia's Forthcoming Scheme

- The timetable:
  - Jul 08 - Green Paper on scheme design
  - Dec 08 - exposure draft legislation package
  - End 08 - firm indication of planned medium-term trajectory
  - Mar 09 - Bill introduced into Parliament
  - Mid-09 - passage of Bill
  - 3<sup>rd</sup> Qtr 09 - Act enters into force; scheme regulator established
  - **ASX futures & options listed**
  - 3<sup>rd</sup> Qtr 09 – national registry is operational
  - Early 10 - first auction of emission permits
  - **ASX Austraclear safe-keeping & settlement services**
  - 1 Jul 10 - formal commencement of scheme
  - 30 Jun 11 - end of first compliance period
  - 31 Oct 11 - dead-line for companies to report their emissions
  - 15 Dec 11 - dead-line for surrender of permits

# Likely Market Evolution (Australia)

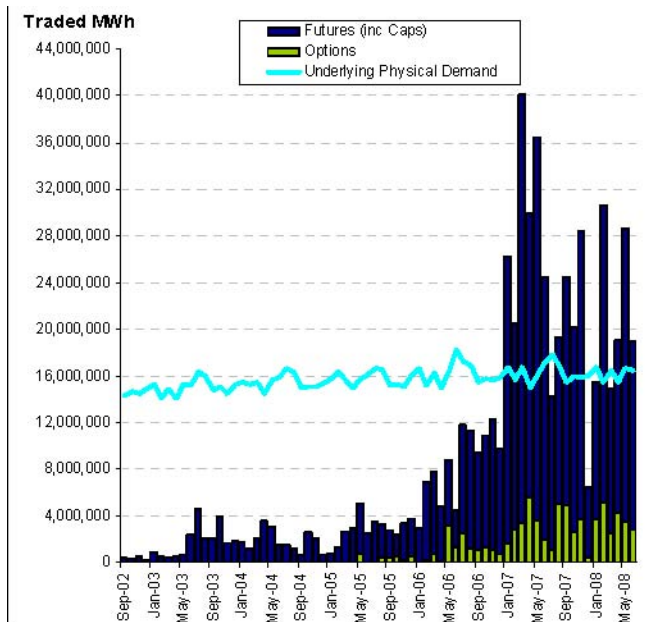


Scheme	EU ETS	AETS	NZ ETS
Approx. size of cap pa (Mt)	2000	420	30
ADV futures equiv. (1,000 permits)	7,870	1,653	118

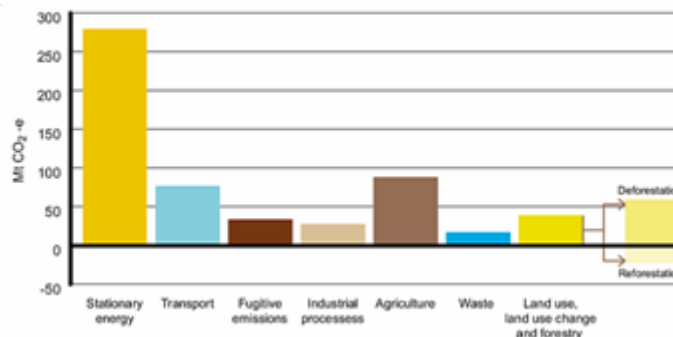


# Likely Market Evolution (Australia)

## Electricity Futures & Options: Volume

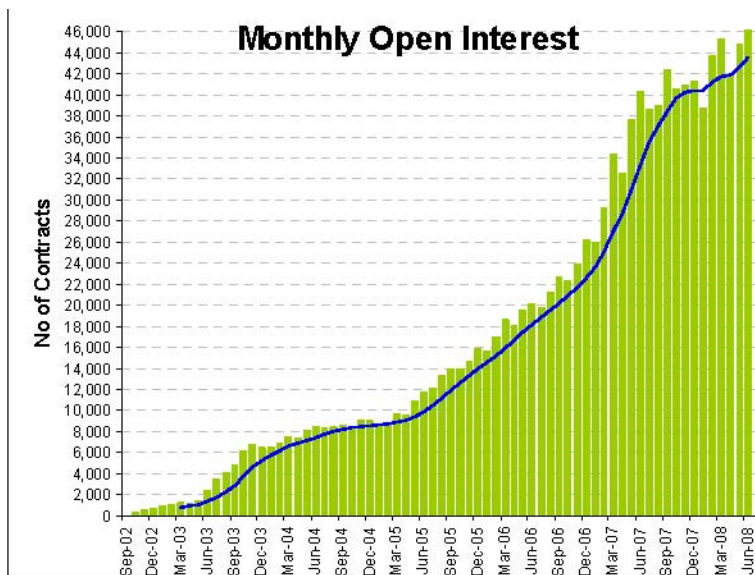


Australia's national emissions profile in 2006



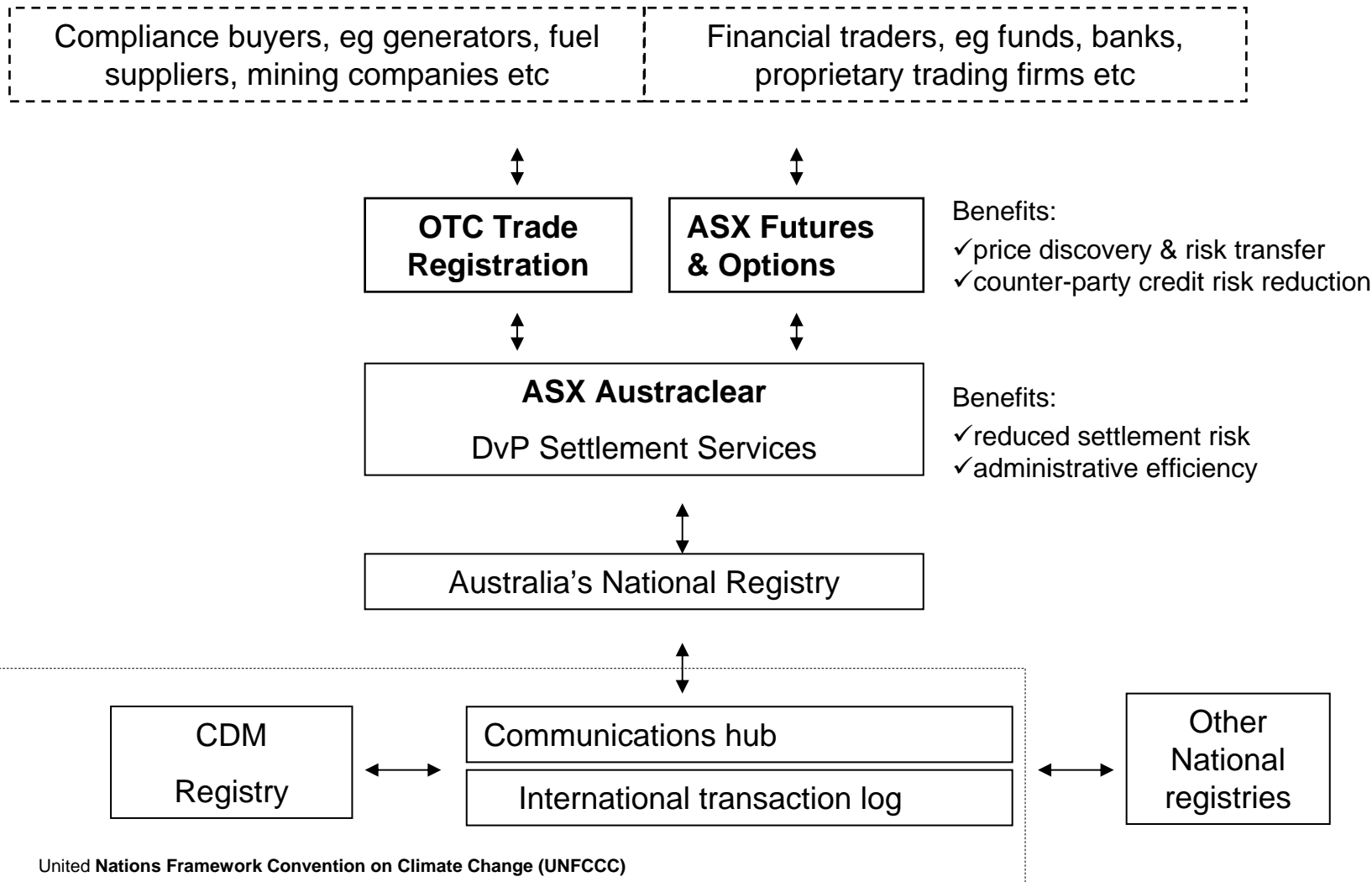
Source: National Greenhouse Gas Inventory 2006, Department of Climate Change

## Electricity Futures & Options: Open Interest





# Emissions Trading at ASX



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## ASX Carbon Pollution Permit Futures

Unit of Trading	One lot of 1,000 carbon pollution permits.
Price Quotation	Australian dollars (\$) and cents (c) per metric tonne, eg \$32.55.
Contract Month	Financial year expiries for the first 5 years of the ETS.
Last Trading Day	15 November or prior Business Day.
Delivery	Delivery via Austraclear on the business day following the last trading day.

### Benefits:

- ✓ a low Block Trade threshold to facilitate the registration of trades from the OTC market
- ✓ the largest clearing house in the Asia Pacific (by value)
- ✓ market to open 24 hrs x 5.5 days
- ✓ global distribution via ASX trading hubs in major financial capitals
- ✓ existing connectivity to all major investment banks and brokerage firms
- ✓ capital efficiency through margin offsets with electricity, RECs, gas and coal

# Emissions Trading at ASX

## ASX Austraclear Safe Keeping & Settlement Services

Participant:	AC ACHO (AUSTRACLEAR LIMITED HEAD OFFICE)		
Counterparty:	[Dropdown]		
Series:	REC Hydro 08 [Dropdown]	Description:	[Dropdown]
ISIN:	[Dropdown]	Issuer:	[Dropdown]
<input type="button" value="Reset"/>			
Side:	<input type="radio"/> Buy <input type="radio"/> Sell	Agreement type:	[Greyed out]
Trade date:	26/08/2008 [Dropdown]	Sub participant:	AC ACHO 20 [Dropdown]
Settlement date:	26/08/2008 [Dropdown]	SSI:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Quantity:	0 [Text]	Sub account:	[Greyed out]
Price:	0 [Text]	Cash record:	[Greyed out]
Novation:	<input type="radio"/> Yes <input checked="" type="radio"/> No	Settle currency:	[Greyed out]
Payment settle:	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Sell settlement instruction	[Text area]		
Information:	[Text area]		
Participant ref:	[Text area]		
Consideration:	0 [Text]	<input type="button" value="Calculate"/>	<input type="button" value="Send"/>

# Key Points

- The cost of investment uncertainty > the cost of climate change or mitigation efforts.
- Prior to the commencement of a robust forward market, investment decision making and forward trading within carbon intensive sectors, eg electricity, is sub-optimal.
- Market price for carbon pollution permits is likely to be driven by the trajectory set for the Scheme and its inter-play with inter-related energy markets more so than prices for eligible Kyoto units?
- Price discovery and risk transfer will commence and reside predominately within the forward markets.
- Efficient price discovery and risk transfer will in turn underpin informed investment in low emissions technologies and abatement at least cost.
- Many firms will use Australia's debt and equity markets operated to raise capital to develop and/ or deploy new low-emissions technologies.